

SURVEY CONTROL DATA IN QUADRANGLE 220

27 ATA (USGS, 1950; Ashe County, North Carolina)

Located at Fleetwood, 18 feet east of centerline of junction of T-road, on projection of centerline of road west; 6 feet east of sign post. Station is a standard tablet stamped "27 ATA 1950 2876", painted "BM 2875.9" and set in a concrete post.

Reference Mark is 150 feet west of tablet, on northeast concrete wing-wall of wooden bridge, a chiseled square; 2.5 feet lower than the tablet.

NOTE: Searched for but not recovered, 1965.

ELEVATION: 2875.94 feet (G-3)

28 ATA RESET (USGS, 1950; RESET, North Carolina Highway, 1965; Ashe County, North Carolina)

Located 1.0 miles north of Fleetwood. To reach, go along paved road; thence 0.9 miles northeast along road to Oval; on south side of new road; on edge of lawn of Dillon Poole home. Station is a standard tablet stamped "28 ATA 1950 RESET 1965", in concrete post.

ELEVATION: 3139.85 feet

BALD OF RICH (USGS, 1934; Watauga County, North Carolina)

Located about 2 1/2 miles southeast of Zionville, 2 1/4 miles south of Tennessee - North Carolina state line, on mountain known as "Bald of Rich", on summit of cleared knob which is central one of three peaks of about same elevation, 25 feet west of highest point of summit, and 4 feet north of longitudinal center. To reach from junction of U. S. Route 421 and Tennessee Route 67 at Trade, Tennessee, go south 1.0 mile on Route 421, turn east onto "Meat Camp" road and go 0.85 mile, keep up hill at fork and go 2.5 miles to gap at top of grade at foot of mountain, and end of truck travel, turn right across field and go 1/2 mile to edge of woods. Follow path through woods 0.4 mile along side of ridges, turn right up ridge before reaching large clearing and go 0.7 mile along ridge to second summit and station site.

Station is a standard U.S. Geological Survey disk in drill hole in bedrock. Reference marks and the azimuth mark are standard reference disks in bedrock.

Reference Mark 1 is down slope of summit and 28.24 feet from station in geodetic azimuth 165°00'.

Reference Mark 2 is on back bone of ridge, 47.14 feet from station in geodetic azimuth 70°53'.

Azimuth is on backbone of ridge, near southwest end of knob, in center one of three rocks, and between 330 and 350 yards from station.

GEODETIC POSITION: Lat. = 36°18'44.002"; Long. = 81°43'00.480" (C-2)

Geodetic Azimuth to Azimuth Mark: 58°16'27.5"

GRID POSITION (North Carolina): X = 1,199,563.34; Y = 943,490.52 (C-2)

Grid Azimuth to Azimuth Mark: 59°50'33"

GRID POSITION (Tennessee): X = 3,261,615.04; Y = 726,590.44 (C-2)

Grid Azimuth to Azimuth Mark: 55°46'00.3"

ELEVATION: 1638.0 meters or 5374 feet (HWY-5)

BM 2855.769 (USGS, 1963; Ashe County, North Carolina)

Located at Creston, about 150 feet south of junction of State Highway 88 and County Road 1100, at Creston Methodist Church; on southwest corner upstream end of north abutment of steel bridge over north fork New River. Station is a chiseled square.

ELEVATION: 2855.77 feet (G-3)

BM 3167.1 (USGS, 1963; Ashe County, North Carolina)

Located 5.2 miles south of West Jefferson, along U.S. Highway 221; 0.5 mile north of junction of State Highway 194; 42 feet west of, and 1 foot higher than centerline of road at T-road west. Station is a chiseled square, painted "BM 3167.1", on northeast corner of concrete platform at entrance to store.

ELEVATION: 3167.10 feet (G-3)

9 DSW (USGS, 1963; Ashe County, North Carolina)

Located in Todd, to reach, go 0.3 mile northwest of Todd's Post Office to State Highway 194; 105 feet east of County Line sign (Watauga and Ashe Counties) in Ashe County, 7 feet lower than centerline of road. A standard tablet stamped "9 DSW 1963 2981", painted "BM 2980.9", in southeast corner of concrete culvert.

Reference Mark is 27 feet west of and level with tablet, on southwest end of concrete culvert, a chiseled square.

ELEVATION: 2980.78 feet (G-3)

10 DSW (USGS, 1963; Ashe County, North Carolina)

To reach station from Todd go, 0.3 mile northwest of Todd's Post Office to State Highway 194, thence 1.8 mile north on County Road 1100, 55 feet north of and 3 feet higher than drive to drive west, 20 feet west of centerline of road. Station is a standard tablet stamped "10 DSW 1963 3126", painted "3126.1".

Reference Mark is 55 feet southeast of and 3 feet lower than tablet, in centerline of road at private drive west; copper nail and washer.

ELEVATION: 3126.11 feet (G-3)

11 DSW (USGS, 1963; Ashe County, North Carolina)

Located at Baldwin, about 250 feet southwest of junction of U.S. Highway 221 and State Highway 194; 15 feet north of, and 1 foot lower than centerline of road, on northeast end of concrete culvert over field creek. A standard tablet stamped "11 DSW 1963", and painted "BM 3095.4".

Reference Mark is 33 feet south of tablet, on southeast end of concrete culvert over Field Creek, a chiseled square.

ELEVATION: 3095.41 feet (G-3)

12 DSW (USGS, 1963; Ashe County, North Carolina)

From Baldwin go 2.1 miles west from junction of U.S. Highway 221 and State Highway 194; 18 feet northwest of, and about 3 feet lower than centerline of road. A standard tablet stamped "12 DSW 1963 3247", on northeast end of concrete culvert.

Reference Mark is 36 feet northeast of tablet, in root on south side of 16 inch poplar tree; 5 feet higher than tablet; copper nail and washer.

ELEVATION: 3247.08 feet (G-3)

13 DSW (USGS, 1963; Ashe County, North Carolina)

To reach from Baldwin, go 4.0 miles west from junction of U.S. Highway 221 and State Highway 194, 15 feet north of, and 2 feet lower than centerline of road. A standard tablet stamped "13 DSW 1963 3611" and painted "BM 3611.2", on northwest corner of concrete culvert.

Reference Mark is 3 feet east of tablet; on northeast corner of concrete culvert; chiseled square.

ELEVATION: 3611.24 feet (G-3)

14 DSW (USGS, 1963; Ashe County, North Carolina)

Located 1.6 miles southwest of Smethport, along County Road 1136; about 130 feet northwest of junction of County Roads 1131 and 1132; 16 feet south of southwest corner of Mt. Paddy Church. A standard tablet stamped "14 DSW 1963 2854", painted "BM 2854.2", in southeast end of concrete headwall over small creek.

ELEVATION: 2854.17 feet (G-3)

15 DSW (USGS, 1963; Ashe County, North Carolina)

To reach from Smethport, go 3.8 miles southwest from junction of County Road 1131 and State Highway 194 and 88, along County Roads 1131 and 1125; at end of hardtop road; 25 feet north of, and about 6 inches higher than centerline of road; 75 feet west of drive north; 2 feet south of fence; and about 6 feet south of telephone pole A 53. A standard tablet stamped "15 DSW 1963", painted "BM 3059.9".

Reference Mark is 42 feet east of tablet, in root on south side of oak tree; copper nail and washer.

ELEVATION: 3059.90 feet (G-3)

16 DSW (USGS, 1963; Ashe County, North Carolina)

To reach from Smethport go 5.6 miles southwest from junction of State Highway 194 and County Road 1131. Station is located at summit of Three Top Mountain; 75 feet west of County Road 1131 up an old trail. A standard tablet stamped "16 DSW 1963 3731", painted "BM 3730.7", in large rock.

Reference Mark is 30 feet north of tablet; on large rock; chiseled square.

ELEVATION: 3730.73 feet (G-3)

ET 5 JRH (USGS, 1963; Ashe County, North Carolina)

Located about 1.4 miles east of Boone Courthouse, 2.8 miles north of junction of State Highway 194 and U.S. Highway 421, along State Highway 194 to Sands Community. To reach, go 2.9 miles right along County Road 1333 to Y-road fork (Road 1335); 26 feet northwest of northwest corner of small building (formerly a store). Located 12 feet south and 50 feet west of drive north; 15 feet south of road; 11 feet east of power pole; 8 feet west of centerline of field road; in concrete post. A standard tablet stamped "ET 5 JRH 1963" in concrete post.

GRID POSITION (North Carolina): X = 1,231,238; Y = 922,971 (G-3)

ET 6 JRH (USGS, 1963; Ashe County, North Carolina)

To reach from Tolliver, go 0.6 mile west of Perkins Store, along secondary road up Bald Fork to drive left to white dwelling. To reach, go 0.6 mile through gate to old buildings on right, thence 0.4 mile left; about 300 feet north of saddle; 153' (sloped) southeast of southeast corner of woods on top of hill. A standard tablet stamped "ET 6 JRH 1963" in small boulder outcrop on cleared slope. It is located 130 feet northeast of gate and fence intersection.

GRID POSITION (North Carolina): X = 1,229,445; Y = 961,847 (G-3)

GAGING STATION RM 1 (USGS, 1963; Ashe County, North Carolina)

Located about 1 mile north of Baldwin, 40 feet shoreward from bridge over old Field Creek; on left bank 25 feet downstream from bridge. A bolt in southwest side of 24 inch hickory tree; 1 foot above ground.

ELEVATION: 3159.01 feet (G-3)

GAGING STATION RM 2 (USGS, 1963; Ashe County, North Carolina)

Located about 1 mile north of Baldwin, 12 feet streamward in approach section from bridge over old Field Creek. A bolt, in streamward side of a 12 inch tree.

ELEVATION: 3157.77 feet (G-3)

GLEN (NORTH CAROLINA HIGHWAY DEPT., 1969; Watauga County, North Carolina)

Located approximately 4.0 miles north-northwest of Boone, North Carolina. To reach station proceed from U.S. 421 and SR 1306 (Junaluska Road), go east up mountain on SR 1306 for 2.0 miles to "T" intersection, turn left on gravel road (SR 1306) and follow along the south side of the mountain for 0.9 mile to crossroads, continue straight across crossroads (SR 130) for 0.2 mile to trailer home of Glen G. Beach, approximately 300 feet east of Mr. Beach's home turn left on rock road going up steep grade for 0.35 mile to station on right at start of open field. Station is 54.9 feet east of a 4 inch twin hickory with aluminum reference tag; 28.4 feet north of a 4 inch hickory, with aluminum reference tag; 8.2 feet south of center of farm path; 202.7 feet southwest of a 30 inch oak in field on north side of farm path, and with aluminum reference tag. Station mark is a standard North Carolina Brass Traverse disk, stamped "GLEN 1969" set in the top of a concrete cylinder, the top of which is flush with the surface of the ground.

GEODETIC POSITION: Lat. = 36°16'44.77473"; Long. = 81°42'46.30694" (HWY-3)

Geodetic Azimuth to Whitener MGS: 336°00'22.6"

GRID POSITION (North Carolina): X = 1,200,393.51; Y = 931,406.08 (HWY-3)

Grid Azimuth to Whitener MGS: 337°34'19"

ELEVATION: 4352 feet or 1326.4 meters (HWY-5)

LEWIS (USGS, 1934; Johnson County, Tennessee)

Located about 0.6 mile southwest of Amber Gap and about 4.9 miles southeast of Mountain City, on southwest end of open top. To reach station from Mountain City take highway 67 to Shoums crossroad, turn left and proceed 2.7 miles, turn right and proceed 1.0 mile, turn left and proceed 3.4 miles to Amber Gap. Walk southwest to top of mountain. Station is standard tablet stamped "LEWIS 1934", set in large boulder.

GEODETIC POSITION: Lat. = 36°26'40.792"; Long. = 81°43'16.931" (G-3)

To Station Azimuth Back Azimuth

Iron 121°20'59.3" 301°15'45.8" 4.186 535 9.5

Bald Knob 179°21'09.1" 359°21'06.9" 3.879 381 4.7

Snake 353°27'59.3" 173°28'29.1" 4.074 963 7.4

GRID POSITION (Tennessee): X = 3,258,162.7; Y = 774,700.9 (G-3)

GRID POSITION (North Carolina): X = 1,199,539; Y = 991,728 (G-3)

ELEVATION: 4349 feet (T-5)

LR 77 (TVA, 1937; Watauga County, North Carolina)

Located 4.0 miles northwest of Boone, North Carolina. To reach from Silver Stone North Carolina post office, drive south 0.2 mile to T-road left. Take T-road left 3.0 miles to Y-intersection near top of ridge. Bear right along ridge 0.5 mile to T-road left near new stone house in gap. Turn left 0.3 mile to creek crossing road. Take right through cabbage patch to northeast

81-37-30
56
38 26

end of ridge 1500 feet southeast of creek crossing. Station is a 1 inch by 1 inch by 1/8 inch angle iron stamped "TVA LR 77 1937".

Reference Mark 1 is 2.40 feet N71°W to a 3 inch ash tree.
Reference Mark 2 is 3.72 feet N42°E to a 2 inch ash tree.
Reference Mark 3 is 6.35 feet S83°E to a 2 inch hickory tree.

GRID POSITION (Tennessee): X = 3,259,853; Y = 710,359 (T-4)
ELEVATION: 4308 feet (T-5)

LR 78 (TVA, 1937; Watauga County, North Carolina)

Located 2.5 miles east of Trade, Tennessee. To reach from Trade, Tennessee, drive east on Tennessee Highway 67 for 2.6 miles to store and farm on left. Go up ridge to left beyond farm 1000 feet to fence line intersection in east of woods. Point is in fence corner. Station is a 1 inch by 1 inch by 1/8 inch angle iron, stamped "TVA LR 78 1937".

Reference Mark 1 is 11.26 feet N27°E to chestnut stump.
Reference Mark 2 is 2.46 feet S33°E to chestnut stump.
Reference Mark 3 is 2.28 feet S25°W to 12 inch dogwood.

GRID POSITION (Tennessee): X = 3,260,836; Y = 749,306 (T-4)
ELEVATION: 3544 feet (T-5)

LR 79 (TVA, 1937; Johnson County, Tennessee)

Located on Buck Knob 2.5 miles north of Trade. To reach from Trade, Tennessee, drive north on U.S. Highway 421 2.7 miles to intersection right across creek. Go up creek 0.5 mile to bars, take hogback right through cornfield to top of ridge, thence right along ridge 150 feet to two locust trees. Point is between trees. Station is a 1 inch by 1 inch by 1/8 inch angle iron, stamped "TVA LR 79 1937".

Reference Mark 1 is 1.50 feet N79°E to a 12 inch locust tree.
Reference Mark 2 is 2.20 feet S8°W to a 10 inch locust tree.

GRID POSITION (Tennessee): X = 3,252,099; Y = 748,968 (T-4)
ELEVATION: 3572 feet (T-5)

LR 80 (TVA, 1937; Watauga and Johnson Counties, North Carolina and Tennessee)

Located on top of ridge on North Carolina-Tennessee State Line. To reach from Trade, Tennessee drive east on Tennessee Highway 67 2.4 miles to barn on left. Take up hollow bearing nearly east to head of same. Point is on ridge line 34 feet south of clump of large dead oaks and on west side of rail fence. No reference marks available. Station is a 1 inch by 1 inch by 1/8 inch angle iron, stamped "TVA LR 80 1937".

GRID POSITION (Tennessee): X = 3,257,046; Y = 747,915 (T-4)
ELEVATION: 3927 feet (T-5)

LR 81 (TVA, 1937; Johnson County, Tennessee)

Located 4.6 miles southeast of Mountain City, Tennessee. To reach from Daniel Chapel School, drive east on Baldwin Gap Road, 1.9 miles to Y-intersection. Turn right up creek bearing right at schoolhouse. To end of road, thence up hollow to top of ridge. Point is at 20 inch locust in rail of fence line 50 feet west of point of weeds. Station is 1 inch by 1 inch by 1/8 inch angle iron.

Reference Mark is 1.42 feet N80°E to 20 inch locust.
Reference Mark is 6.31 feet S24°W to 8 inch locust.

GEODETIC POSITION: Lat. = 36°24'38.737"; Long. = 81°44'52.566" (T-4)
GRID POSITION (Tennessee): X = 3,250,892; Y = 762,029 (T-4)
GRID POSITION (North Carolina): X = 1,191,385.4; Y = 979,604.1 (T-4)
ELEVATION: 3744 feet (T-5)

LR 82 (TVA, 1937; Ashe County, North Carolina)

Located 7 1/2 miles east of Mountain City, Tennessee. To reach from Shouns, Tennessee drive east on Hemlock Road 1.9 miles to Y-intersection. Then bear left on Forge Creek road 6.3 miles to Paines Gap, then continue east 0.5 miles to Y-intersection, then turn right 0.8 mile to farm road on right. Follow farm road 500 feet across brook, then take sled road left to gap, then follow ridge right 300 feet to top of knob. Point is 50 feet west of top of knob. Station is a 1 inch by 1 inch by 1/8 inch angle iron, stamped "TVA LR 82 1937".

Reference Mark 1 is 1.89 feet N7°W to 10 inch chestnut.
Reference Mark 2 is 10.36 feet N62°E to fence post.
Reference Mark 3 is 11.48 feet S40°E to chestnut stump.

GRID POSITION (Tennessee): X = 3,267,362; Y = 789,875 (T-4)
ELEVATION: 3571 feet (T-5)

LR 83 (TVA, 1937; Johnson County, Tennessee)

Located 5.2 miles east of Mountain City, Tennessee. To reach from Shouns, Tennessee drive east on Hemlock Road 1.9 miles to fork, then bear left 4.3 mile to frame house across creek on left. Take up long cleared hollow to north 2000 feet to northeast corner of cleared field on right (west) slope of hollow. Point is 75 feet west of corner at edge of field. Station is 1 inch by 1 inch by 1/8 inch angle iron. It is 4000 feet northeast of Hammons Church.

Reference Mark 1 is 15.36 feet S60°W to 3 inch oak.
Reference Mark 2 is 9.43 feet N67°W to 3 inch twin oak.
Reference Mark 3 is 7.95 feet N7°W to 3 inch oak.

GRID POSITION (Tennessee): X = 3,255,982; Y = 789,396 (T-4)
ELEVATION: 3347 feet (T-5)

MED 256 (TVA, 1955; Ashe County, North Carolina)

Located 0.65 miles north of junction of State Highway 88 and state gravel road to Roten which is 500 feet northwest of Fig, North Carolina post office. BM is on highest point of east one of two large boulders in pasture field between road and creek, 42 feet N25°E from centerline creek, 22.0 feet N20°E from 15 inch sugar maple, and 97 feet S50°W from centerline road. Station is on gravel road up Rich Hill Creek, on property owned by J. W. Graybeal. Station is a chiseled square.

ELEVATION: 2881.25 feet (T-3)

MED 257 (TVA, 1955; Ashe County, North Carolina)

Located 1.85 miles north of junction of State Highway 88 and state gravel road to Roten which is 500 feet northwest of Fig, North Carolina post office, on side road over Rich Hill Creek, about 1000 feet southwest of Rich Hill Cemetery, 70.3 feet S70°E from northeast corner of J. W. Graybeal house, 60.0 feet N55°W from centerline of T-road north, and 27.0 feet N15°E from junction of Rich Hill Creek and small creek north. Station is a standard TVA tablet stamped "MED 257 1955" and set on northwest abutment of bridge.

ELEVATION: 2976.23 feet (T-3)

MED 258 (TVA, 1955; Ashe County, North Carolina)

Located 2.85 miles north of junction of State Highway 88 and state

gravel road up Rich Hill Creek, which is 500 feet northwest of Fig, North Carolina post office. BM is on highest point of west one of two boulders at east end of Rich Hill Creek between road and creek, and about 200 feet downstream from bridge. Station is a chiseled square.

ELEVATION: 3099.52 feet (T-3)

MED 259 (TVA, 1955; Ashe County, North Carolina)

To reach from Warrensville, North Carolina (Ashe County), go 7.3 miles along State Road 88 west to gravel road intersection north. Turn right or north up Rich Hill Creek road and go 4.0 miles to station. Station is located on west side of road on west side of creek. Station is a standard TVA tablet stamped "MED 259 1955" and set in a 3 by 8 foot sandstone boulder.

Reference Mark 1 is 33.40 feet S12°E to chiseled square in boulder.
Reference Mark 2 is 32.8 feet east to a nail in a 24 inch oak.
Reference Mark 3 is 14.0 feet west to centerline of creek.

ELEVATION: 3295.94 feet (T-3)

MED 275 (TVA, 1955; Ashe County, North Carolina)

To reach from Warrensville, North Carolina, go 14.0 miles southwest along State Road 88 to bridge over Rock Creek and station, 15.5 feet S20°W from centerline of bridge, and 52.0 feet south from centerline of T-road west. Station is a standard TVA tablet stamped "MED 275 1955" and set in wing wall of south abutment of bridge over creek on upstream side.

ELEVATION: 2944.11 feet (T-3)

MED 276 (TVA, 1955; Ashe County, North Carolina)

To reach from Warrensville, North Carolina, go southwest on State Road 88 16.30 miles to junction with Brushy Fork road to bridge over Brushy Fork Creek and station. It is 60.0 feet N50°W from centerline of T-road, 56.0 feet N20°E from centerline of bridge and 106.0 feet N70°E from corner of barn. Station is a standard TVA tablet stamped "MED 276 1955" and set in top of a large boulder on northwest side of highway, on property owned by Mr. G. D. Wilson.

ELEVATION: 3027.42 feet (T-3)

MED 277 (TVA, 1955; Ashe County, North Carolina)

To reach from Warrensville, North Carolina, go south and west toward Trade, Tennessee, 18.8 miles to station. BM is on the east side of road about 30.0 feet from centerline and about 2.0 feet lower than road. It is 30.2 feet east from centerline of highway, 65.8 feet N50°E from double pine tree; and 6.0 feet east from fence line. Station is a standard TVA tablet stamped "MED 277 1955" and set in top of a sandstone boulder.

NOTE: Searched for but not recovered, September 1959.

ELEVATION: 3140.64 feet (T-3)

MED 278 (TVA, 1955; Watauga County, North Carolina)

To reach from Warrensville, North Carolina, go 20.9 miles southwest along State Road 88 to Trade, Tennessee to station. BM is set in rock outcrop on top of 12.0 foot cut in fence corner at base of a 24 inch beech tree, on the west side of road. It is about 200.0 feet southeast of a farm house and about 150 feet northeast of a barn. It is 0.7 miles south of Friendship Church, 8.0 feet south from a 24 inch beech tree, 20.9 feet north from a 12 inch iron wood, and 33.0 feet N70°W from centerline of road. Station is a standard TVA tablet stamped "MED 278 1955" and set in rock outcrop.

ELEVATION: 3378.75 feet (T-3)

MED 279 RESET (TVA, 1955; RESET USGS, 1963; Ashe County, North Carolina)

To reach from Warrensville, go 9.7 miles west along State Highway 88 to Creston; thence 0.9 miles south along gravel road up Three Top Creek to station. A standard TVA tablet stamped "MED 279 1955 RESET 1963", painted "BM 2879.9", and set in north end of west headwall of bridge over Elk Creek.

ELEVATION: 2879.88 feet (G-3)

MED 280 (TVA, 1955; Ashe County, North Carolina)

To reach, go 9.7 miles west of Warrensville along State Highway 88 to Creston; thence 2.0 miles south along gravel road up Three Top Creek to bench mark on large boulder on west side of road 19 feet west of centerline and 4.5 feet higher. Station is a chiseled square.

ELEVATION: 2960.8 feet (T-4)

MED 281 (TVA, 1955; Ashe County, North Carolina)

To reach from Warrensville, go 9.7 miles west along State Highway 88 to Creston; thence 3.2 miles south along gravel road up Three Top Creek to station, at Three Top Baptist Church, and about 250 feet north of store. Station is a standard TVA tablet stamped "MED 281 1955" and set in west end of north headwall of bridge over creek.

ELEVATION: 3018.09 feet (G-3)

MED 282 (TVA, 1955; Ashe County, North Carolina)

To reach from Warrensville, go 9.7 miles west along State Highway 88 to Creston; thence 4.3 miles south along gravel road up Three Top Creek to BM. A chiseled square on north end of east headwall of bridge over Three Top Creek.

ELEVATION: 3070.84 feet (G-3)

MED 283 (TVA, 1955; Ashe County, North Carolina)

To reach from Warrensville, go 9.7 miles west along State Highway 88 to Creston; thence 5.0 miles south along gravel road up Three Top Creek to station, about 250 feet east of two-story house and about 350 feet south of barn. A standard TVA tablet stamped "MED 283 1955" and set in north end of west headwall of bridge over Three Top Creek, painted "BM 3123.3".

ELEVATION: 3122.7 feet (T-4)

MED 284 (TVA, 1955; Ashe County, North Carolina)

To reach from Warrensville, go 9.7 miles west along State Highway 88 to Creston, thence 6.1 miles south along gravel road up Three Top Creek to station on property of Eugene Phillips. A chiseled square on sandstone outcrop.

ELEVATION: 3209.1 feet (T-4)

MED 285 (TVA, 1955; Ashe County, North Carolina)

To reach from Warrensville, go 9.7 miles west along State Highway 88 to Creston; thence 7.1 miles south along gravel road up Three Top Creek to station, on north side of road, 25 feet from centerline and 4 feet higher. It is on east side of trail north, and about 250 feet northwest of large two-story house. Station is a standard TVA tablet stamped "MED 285 1955" and set in rock outcrop, painted "BM 3321.0".

ELEVATION: 3320.3 feet (T-4)

- MCD 286** (TVA, 1955; Ashe County, North Carolina)
To reach from Warrensville, go 9.7 miles west along State Highway 88 to Creston; thence 8.0 miles south along gravel road up Three Top Creek to BM. Station is on rock outcrop on west side of road in gap of ridge, 60 feet west of and 7 feet higher on south side of field road west. Station is a chiseled square.
ELEVATION: 3475.5 feet (T-4)
- MCD 287** (TVA, 1955; Ashe County, North Carolina)
To reach from Todd post office, go northeast along hard surface road 0.3 miles to crossroads; thence go north on gravel road up Elk Creek 3.0 miles to station. A standard TVA tablet stamped "MCD 287 1955" and set on ledge on east side of rock outcrop on west side of road.
ELEVATION: 3225.2 feet (T-4)
- MCD 288** (TVA, 1955; Ashe County, North Carolina)
To reach, go northeast of Todd post office along hard surface road 0.3 miles to crossroads; thence go north on gravel road up Elk Creek 1.8 miles to bench mark on boulder on east side of road 55 feet east of and 4.0 feet higher than centerline of T-road east. Station is a chiseled square.
ELEVATION: 3094.6 feet (T-4)
- MCD 289** (TVA, 1955; Ashe County, North Carolina)
To reach, go northeast of Todd post office along hard surface road, 0.3 miles to crossroads; thence go north on gravel road up Elk Creek 0.5 miles to station on east side of road, 25 feet east of centerline and 4 feet higher. A standard TVA tablet stamped "MCD 289 1955" and set in rock outcrop, on property owned by Grant Worley.
ELEVATION: 3045.5 feet (T-4)
- MCD 290** (TVA, 1955; Watauga County, North Carolina)
To reach, go northwest of Todd post office along hard surface road 0.3 miles to crossroads; thence go northwest on State Highway 194 0.6 miles to bench mark on east end of north headwall of culvert over small creek or branch 35 feet west of and 3 feet lower than centerline of T-road north. A chiseled square.
ELEVATION: 3034.76 feet (G-3)
- MCD 291** (TVA, 1955; Watauga County, North Carolina)
To reach from Todd, go 0.3 miles northwest of Todd Post Office, along hard surfaced road to crossroads, thence 1.6 miles northwest along State Highway 194; 15 feet northeast of, and 1 foot lower than centerline of road. A standard TVA disk stamped "MCD 291 1955", painted "BM 3207.0", and set in northwest end of northeast headwall of concrete culvert.
ELEVATION: 3207.00 feet (G-3)
- MCD 292** (TVA, 1955; Watauga County, North Carolina)
To reach, go northwest of Todd post office along hard surface road 0.3 miles to crossroads; thence go northwest on State Highway 194, 2.5 miles to bench mark on southeast end of south headwall of concrete culvert, 30 feet S65°E from centerline T-road southeast and 2 feet lower. Station is a chiseled square.
ELEVATION: 3453.5 feet (T-4)
- MCD 293** (TVA, 1955; Watauga County, North Carolina)
To reach, go northwest of Todd post office, along hard surface road 0.3 mile to crossroads; thence go northwest on State Highway 194, 3.9 miles to station. A standard TVA tablet stamped "MCD 293 1955" and set in north end of east headwall of concrete culvert, painted "BM 3436.4".
ELEVATION: 3435.6 feet (T-4)
- MCD 294** (TVA, 1955; Watauga County, North Carolina)
To reach from Boone, go 1.3 miles east along Highway 421; thence 5.8 miles north on State Highway 194 to BM on south end of west headwall of concrete culvert, 15 feet west of centerline road over drain and 2 feet lower. Station is a chiseled square.
ELEVATION: 3261.03 feet (G-3)
- MCD 295** (TVA, 1955; Watauga County, North Carolina)
To reach from Boone, go 1.3 miles east along Highway 421; thence 4.9 miles north on State Highway 194 to station, 15 feet west of and same elevation as centerline of road. A standard TVA tablet stamped "MCD 295 1955" and set in north end of west headwall of concrete culvert, painted "BM 3168.8".
ELEVATION: 3168.77 feet (G-3)
- MCD 296** (TVA, 1955; Watauga County, North Carolina)
To reach, go 1.3 miles east of Boone along Highway 421; thence 3.8 miles north on State Highway 194 to bench mark on south end of east headwall of concrete culvert; 15 feet east of and 3.5 feet lower than centerline of road, about 250 feet southeast of frame house, and about 500 feet north of large brick house. A chiseled square.
ELEVATION: 3258.58 feet (G-3)
- MCD 301** (TVA, 1955; Ashe County, North Carolina)
Located on northwest end of north wing wall of bridge over Buffalo Creek, 0.4 miles east of Warrensville, North Carolina. Station is a chiseled square.
ELEVATION: 2707.19 feet (T-3)
- MCD 302** (TVA, 1955; Ashe County, North Carolina)
Located on east end of a 4 by 10 foot concrete culvert northwest side of road, about 800 feet east of center of gap, 0.5 miles west of Warrensville, North Carolina by State Highway 88. A chiseled square.
ELEVATION: 2847.07 feet (T-3)
- MCD 303** (TVA, 1955; Ashe County, North Carolina)
Located in center of south side of concrete porch at top of steps to small power house, 2.8 miles west of Warrensville, North Carolina, by State Highway 88. A chiseled square.
ELEVATION: 2725.42 feet (T-3)
- MCD 304** (TVA, 1955; Ashe County, North Carolina)
Located on large flat rock on east side of State Highway 88 between highway and fence, 100 feet northwest of centerline of North Fork New River, 7.2 miles south of Warrensville, North Carolina. A chiseled square.
ELEVATION: 2789.59 feet (T-3)
- MCD 305** (TVA, 1955; Ashe County, North Carolina)
To reach from Warrensville, North Carolina, go southwest on State Highway 88, 8.3 miles to bench mark 0.7 mile southwest of Fig post office. BM is on northwest corner on upstream side of middle abutment of steel bridge over Big Laurel Creek. A chiseled square.
ELEVATION: 2821.30 feet (T-3)
- MCD 306** (TVA, 1955; Ashe County, North Carolina)
To reach from Warrensville, North Carolina, go southwest on State Highway 88, 9.7 miles to station, which is 2.1 miles southwest of Fig post office. Bench mark is in southwest corner on upstream end of north abutment of steel bridge over north fork New River at Creston Methodist Church, at junction of Three Top road and Highway 88. A chiseled square.
ELEVATION: 2855.40 feet (T-3)
- MCD 307** (TVA, 1955; Ashe County, North Carolina)
To reach from Warrensville, North Carolina, go southwest on State Highway 88 for 13.0 miles to small crossroads and BM, 2.5 miles southwest from Creston, North Carolina. Bench mark is on rock outcrop 50 feet east of highway and 1.5 feet higher, about 800 feet west of graveyard on small top, about 800 feet north of brick house, 62.5 feet east from centerline of crossroads, and 34.0 feet N40°E from centerline gravel road east. Station is a chiseled square.
ELEVATION: 2919.78 feet (T-3)
- MCD 308** (TVA, 1955; Ashe County, North Carolina)
To reach from Warrensville, North Carolina, go southwest on State Highway 88, 15.1 miles which is 3.5 miles southwest from Creston, North Carolina. Bench mark is on large flat boulder between road and north fork of New River, 5.0 feet lower than centerline road and 2.5 feet higher than average water surface, 12.0 feet west from east end of 15 inch pipe culvert, 35.3 feet S15°W from centerline of road, and about 15.0 feet N15°E from centerline north fork of New River. A chiseled square.
ELEVATION: 2995.78 feet (T-3)
- MCD 309** (TVA, 1955; Ashe County, North Carolina)
Located at Sutherland, North Carolina. To reach from Warrensville, North Carolina, go southwest on State Highway 88, 17.7 miles to T-road east. Bench mark is in northwest corner and upstream end of southeast abutment of bridge over north fork of New River at Sutherland Methodist Church. A chiseled square.
ELEVATION: 3077.21 feet (T-3)
- MCD 310** (TVA, 1955; Ashe County, North Carolina)
Located 19.7 miles southwest of Warrenville, North Carolina by State Highway 88 and 3.6 miles northeast of Trade, Tennessee. Bench mark is on a 4 x 8 flat boulder west side of road, 21 feet north of Ashe and Watauga County lines, and 18 feet west of centerline highway. A chiseled square.
ELEVATION: 3231.12 feet (T-3)
- MCD 311** (TVA, 1955; Johnson County, Tennessee)
Located 22.4 miles southwest of Warrensville, North Carolina by State Highway 88, 0.8 miles northeast of Trade, Tennessee. BM is on southwest end of southwest headwall of a 24 inch culvert, 45 feet southeast from southeast corner of large barn, 9 feet west from a 24 inch apple tree, and 15 feet east of centerline of road. A chiseled square.
ELEVATION: 3287.74 feet (T-3)
- MCD 314** (TVA, 1955; Watauga County, North Carolina)
Located about 5.5 miles northeast of Boone, North Carolina. In open field 40 feet N45°E from fence line east-west, and about 1000 feet west from wooded top. To reach from post office Boone, go east on U.S. Highway 221 for 1.3 miles. Turn left on State Highway 194 and go 5.4 miles to Green Valley School. Turn right and go 2.2 miles on black top road to old school. Turn left on farm road and go 1.5 miles to last house on road. Leave car and walk to top of ridge directly behind house and station. Station is 83.65 feet N34°W from 12 inch poplar, 5.20 feet N87°W from 30 inch apple tree, and 190.5 feet S65°E from fence intersection. A 1 inch angle iron stamped "MCD 314 1955".
GRID POSITION (North Carolina): X = 1,226,061.3; Y = 940,631.2 (T-4)
ELEVATION: 3915 feet (T-5)
- MCD 315** (TVA, 1955; Ashe County, North Carolina)
Located about 5.0 miles northeast of Boone, North Carolina, 150 feet west of highest point of wooded top of Black Mountain. To reach from post office at Todd, North Carolina, go northwest on State Highway 194 0.8 mile to gravel road right. Take road and go 1.0 miles to farm road right. Take farm road through gate and go 0.6 miles to south end of long field end of road. Leave car and walk north through field about 0.8 miles to wooded top and station. A 1 by 1 inch angle iron stamped "MCD 315 1955".
Reference Mark 1 is 2.40 feet N35°W to nail in a 10 inch oak.
Reference Mark 2 is 24.30 feet N35°W to nail in a 24 inch oak.
Reference Mark 3 is 22.7 feet N78°E to nail in an 18 inch red oak.
GRID POSITION (North Carolina): X = 1,229,996.1; Y = 954,149.2 (T-4)
ELEVATION: 4629 feet (T-5)
- MCD 317** (TVA, 1955; Watauga County, North Carolina)
Located about 5.0 miles northeast of Boone, set in open field 50.0 feet north of small top with rock outcrop, which is about 500 feet north of high wooded east-west ridge, 245 feet S88°W from corner of fence at corner of woods. To reach from post office Boone, go east on U.S. 421 for 1.4 miles. Turn left on State Highway 194 and go 2.9 miles. Turn right on Castle Ford Road (gravel) and go 2.0 miles. Turn right on farm road and go 0.3 miles to house. Leave car and walk about 2000 feet south to station. Station is 16.3 feet S25°E from chiseled triangle on rock, 14.8 feet S50°E from chiseled triangle on rock outcrop highest point on rock. A 1 by 1 inch angle iron stamped "MCD 317".
GRID POSITION (North Carolina): X = 1,224,602.8; Y = 922,455.6 (T-4)
ELEVATION: 3523 feet (T-5)
- NEAT CAMP NO. 1** (Watauga County, North Carolina)
Located on south top of Snake Mountain, visible from all stations within range. This signal is not over old triangulation point. Old point could not be located, but must be on same top, according to bearing read to it from a point on state line near Zionville. Compass would not work on the mountain because of some magnetic attraction. Station is a drill hole in rock ledge on west edge of north end of top.

GEODETIC POSITION: Lat. = 36°19'51.420"; Long. = 81°42'28.596" (G-3)
 Geodetic Azimuths Distance

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Bald of Rich	20°56'43.7"	200°56'24.9"	3,347 336	1.4
Bald of Stone	105 39 37.0	285 36 02.4	3,972 275	5.8
Snake	190 15 38.0	10 15 41.5	2,916 174	0.5

MEAT CAMP NO. 2 (USGS, 1934; Watauga-Johnson Counties, North Carolina-Tennessee)
 Located on North Carolina-Tennessee State Line about 1/4 mile north of Zionville. On property of G. C. Greer. Station is a drill hole in rock directly under signal.

GEODETIC POSITION: Lat. = 36°20'16.166"; Long. = 81°44'39.662" (G-3)
 Geodetic Azimuths Distance

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Bald of Stone	107°02'18.8"	287°00'01.7"	3,780 318	3.7
Snake	269 10 27.4	89 11 48.5	3,533 497	2.1
Bald of Rich	318 56 26.3	138 57 25.1	3,575 993	2.3

GRID POSITION (Tennessee): X = 3,253,100.0; Y = 735,547.5 (G-3)
 ELEVATION: 3508 feet (T-5)

MEB 1605 (TVA, 1955; Ashe County, North Carolina)

Located on high point of old field on Bald Mountain near Ashe-Watauga Counties, North Carolina. To reach from post office in Todd, North Carolina, go northwest 0.3 miles to intersection of Todd road and Highway 194. Turn left (southwest) on Highway 194 and go 3.6 miles to T-road right. Turn right and go 1.3 miles to T-road right near top of ridge. Turn right and follow main road 2.7 miles to gate; turn right through gate and follow road 1.1 miles to top of mountain and station site. Station is in center of rock outcrop on high point. A 1 by 1 inch angle iron.

Reference Mark 1 is 5.85 feet S35°W to a 1 inch drill hole in a 3 by 3 foot rock outcrop.
 Reference Mark 2 is 9.00 feet N31°W to a 1 inch drill hole in a 2 by 3 foot rock outcrop.
 Reference Mark 3 is 2.85 feet N18°W to a 1 inch drill hole in a 2 by 4 foot rock outcrop.

GRID POSITION (North Carolina): X = 1,223,025.4; Y = 956,418.2 (T-4)
 ELEVATION: 4958 feet (T-5)

MEB 1606 (TVA, 1955; Ashe County, North Carolina)

Located about 7 miles airline southwest from West Jefferson, North Carolina. To reach from Warrensville, go west 9.7 miles on State Highway 88. Turn left or south up Three Top Creek road for 5.0 miles. Leave car and go west through old fields up sharp ridge to wooded top and station. Station is 13.55 feet N10°E from a triangular blaze on a 20 inch chestnut oak, 27.80 feet N40°E from a triangular blaze on a 24 inch chestnut oak tree, and 12.20 feet S30°W from a triangular blaze on a 10 inch chestnut oak. A 1 by 1 inch angle iron.

GRID POSITION (North Carolina): X = 1,228,326.0; Y = 964,922.5 (T-4)
 ELEVATION: 4081 feet (T-5)

MEB 1607 (TVA, 1955; Ashe County, North Carolina)

Located on highest top of Bluff Mountain, approximately 6 miles airline southwest from West Jefferson, North Carolina. To reach from post office in West Jefferson, go northwest on Highway 88 for 2.7 miles to the Buffalo Creek road. Turn left on Buffalo Creek road and go 2.7 miles to a T-road south at Buffalo Church. Turn left at church and go 2.4 miles to a Y-road intersection. Take left fork at intersection and follow new graded road keeping left forks for 2.0 miles. Leave car at dim trail left and continue through woods up ridge for about 1.0 miles to highest point on mountain and station. Station is about 100 feet west of high point 4.0 feet south of rock cliff, 32.1 feet N62°W from a blaze on a 6 inch scrub oak. Station is a 1 by 1 inch angle iron.

GRID POSITION (North Carolina): X = 1,243,035.1; Y = 971,029.6 (T-4)
 ELEVATION: 5099 feet (T-5)

REG 16 (TVA, 1937; Watauga County, North Carolina)

Located on north side of and 5 feet lower than bald knoll in Watauga County, about 2 miles southeast of Mable. To reach from Mable School House, go southeast on Silver Stone road 2.3 miles to saddle. Station is S70°W about 800 feet on north edge of knoll. Station is a 1 inch by 1 inch angle iron.

Reference Mark 1 is 30.3 feet S47°W to a 15 inch maple.
 Reference Mark 2 is 11.9 feet N72°W to a 30 inch stump.
 Reference Mark 3 is 44.0 feet S20°E to a 4 inch locust.

GRID POSITION (Tennessee): X = 3,253,161; Y = 723,983 (T-4)
 ELEVATION: 3403 feet (T-5)

REG 17 (TVA, 1937; Watauga County, North Carolina)

Located on highest part of a wooded ridge, about 2 miles southeast of Zionville, in Watauga County. To reach from Zionville at crossroads near Sturdivant Funeral Home, go southeast 1.0 mile to gate, and about 2000 feet southeast of highest point of wooded ridge. Station is a 1 by 1 inch angle iron.

Reference Mark 1 is 10.6 feet N10°E to 12 inch oak.
 Reference Mark 2 is 7.6 feet N60°W to 3 inch oak.
 Reference Mark 3 is 14.1 feet S10°W to 6 inch poplar.

GRID POSITION (Tennessee): X = 3,258,046; Y = 729,944 (T-4)
 ELEVATION: 4369 feet (T-5)

REG 18 (TVA, 1937; Watauga County, North Carolina)

Located about 3 miles east of Mable on Rich Mountain on a rocky outcrop locally known as Potato Hill. To reach from U.S. Highway 421 and state line; go south, on 421 0.2 mile to side road left to church on north side of Zionville. Turn left (gap road) and follow 0.8 mile to T-road, turn right and follow 2.5 mile to gap of Rich Mountain. Station is about 1.5 miles south along ridge on a high rocky outcrop. Station is a 1 inch by 1 inch angle iron.

Reference Mark 1 is 38.6 feet S75°E to an 8 inch locust.
 Reference Mark 2 is 38.9 feet S34°E to a 4 inch locust.

GRID POSITION (Tennessee): X = 3,260,127; Y = 722,993 (T-4)
 GRID POSITION (North Carolina): X = 1,197,823.3; Y = 940,007.7 (T-4)
 ELEVATION: 5192 feet (T-5)

REG 19 (TVA, 1937; Watauga County, North Carolina)

Located about 1.5 miles east of gap of Rich Mountain on wooded hillside about 300 feet north of an open field in Watauga County, North Carolina; to reach from U.S. Highway 421 and state line; go south on 421 0.2 mile to a side road at church; turn left (gap road) go 0.8 mile to T-road, turn right and follow 3.6 miles to side road (Tanapack road), turn left, follow 0.6 mile to farm house and side road, turn right and follow farm road 0.5 mile bearing

to right until you get to saddle. Station is 300 feet northeast in woods. Station is a 1 inch by 1 inch angle iron.

Reference Mark 1 is 14.2 feet S15°E to an 8 inch maple.
 Reference Mark 2 is 12.5 feet N55°W to a 15 inch oak.
 Reference Mark 3 is 10.4 feet S70°E to a 3 inch maple.

GRID POSITION (Tennessee): X = 3,270,929; Y = 729,441 (T-4)
 ELEVATION: 4171 feet (T-5)

REG 20 (TVA, 1937; Johnson County, Tennessee)

Located on the west side of a ridge about 1.0 mile east of Trade, Tennessee, on highest part of ridge in Johnson County, Tennessee. To reach from Trade; at the intersection of Tennessee 67 and U.S. 421 go north on Tennessee 67 0.8 mile to farm road and house, go right 0.1 mile to house. Station is 0.8 mile east. Station is a 1 inch by 1 inch angle iron.

Reference Mark 1 is 31.8 feet S35°W to an 8 inch hickory.
 Reference Mark 2 is 26.2 feet N75°E to corner of rock.
 Reference Mark 3 is 105.1 feet N20°W to a 6 inch locust.

GRID POSITION (Tennessee): X = 3,259,372; Y = 740,966 (T-4)
 ELEVATION: 4249 feet (T-5)

REG 21 (TVA, 1937; Ashe County, North Carolina)

Located on a bare ridge 1/2 mile east of Baldwin Gap in Ashe County, North Carolina. To reach from Shouns at cross roads; go south on U.S. 421 3.0 miles to side road left. Turn left and follow gravel road 1.6 miles to forks. Turn left and go 2.2 miles to turn right at house. Station is 1000 feet N70°E of turn in road. Station is a 1 inch by 1 inch angle iron.

Reference Mark 1 is 58.63 feet N24°W to a 24 inch locust.
 Reference Mark 2 is 8.5 feet N46°E to a fence post.
 Reference Mark 3 is 7.6 feet S48°E to a fence post.

GRID POSITION (Tennessee): X = 3,260,105; Y = 767,532 (T-4)
 ELEVATION: 3762 feet (T-5)

REG 22 (TVA, 1937; Ashe County, North Carolina)

Located on top of a bare hill about 10 feet west of fence going over top of hill at edge of weeds in Ashe County, North Carolina. To reach from Shouns take cross roads, go on U.S. 421 3.0 miles to side road. Turn left and go 1.6 miles to forks. Turn left and follow 3.4 miles to T-roads; turn left and follow 0.7 mile to a draw to the right. Station is 1000 feet northeast on top of high hill. Station is a 1 inch by 1 inch angle iron.

Reference Mark 1 is 47.20 feet S75°W to a 6 inch wild cherry.
 Reference Mark 2 is 17.4 feet N13°E to a fence post.
 Reference Mark 3 is 7.7 feet N45°E to a stump.

GRID POSITION (Tennessee): X = 3,260,084; Y = 762,152 (T-4)
 ELEVATION: 3606 feet (T-5)

REG 23 (TVA, 1937; Ashe County, North Carolina)

Located in pasture on southwest slope of steep hill about 14 miles southeast of Mountain City, Tennessee and in North Carolina. To reach from Shouns (2 miles south of Mountain City) drive east on gravel road 2.0 miles to forks of road at wooden bridge. Turn left and proceed 0.8 mile to side road leading to right up steep hill. Turn right and continue 8.9 miles to junction with temporary Highway 16 North Carolina. Turn right on Highway 16 and proceed 1.9 miles to second class road to right. Turn right and drive 1.2 miles to old house at wagon road leading to right up long hollow. Walk up hollow to right to group of sheds at right, then up rail fence to ridge line and up ridge to station; 5 feet east of rail fence, 150 feet downhill from woods. Station is a 1 inch by 1 inch angle iron.

Reference Mark 1 is 10.7 feet N39°E to a 24 inch stump.
 Reference Mark 2 is 16.8 feet N33°W to a 36 inch stump.
 Reference Mark 3 is 18.0 feet S44°W to a 12 inch log.

GRID POSITION (Tennessee): X = 3,270,993; Y = 768,560 (T-4)
 ELEVATION: 3610 feet (T-5)

SNAKE (USGS, 1934; Watauga-Johnson Counties, North Carolina-Tennessee)

Located on Tennessee-North Carolina state line about 2.3 miles north-east of Zionville and about 1.3 miles north of Deep Gap, on extreme top of north end of Snake Mountain. To reach station from Mountain City take U.S. 311, 12 miles to Trade, Tennessee. Continue 0.9 mile beyond Trade to church, turn left onto Meat Camp road. Proceed 1.0 mile and turn left thru gate and go to first house. Walk up mountain to station. Station is a standard tablet stamped "SNAKE-1934" and set in rock ledge.

GEODETIC POSITION: Lat. = 36°20'17.741"; Long. = 81°42'22.707" (G-3)
 Geodetic Azimuths Distance

To Station	Azimuth	Back Azimuth	Log. Meters	Miles
Bald of Rich	18°03'47.8"	198°03'25.5"	3,482 737	1.9
Bald of Stone	100 37 10.6	280 33 32.4	3,970 352	5.8

GRID POSITION (Tennessee): X = 3,264,287.9; Y = 736,195.9 (G-3)
 ELEVATION: 5518 feet (T-5)

TROUT (USGS, 1934; Ashe County, North Carolina)

Located about 6 3/4 miles northeast of Trade, Tennessee; 7 1/2 miles northwest of Elks crossroads 5 miles a little north of east of triconity corner of Johnson County, Tennessee, and Ashe and Watauga Counties, North Carolina, on highest point near north end of sharp rock point of Blue Ridge Mountains known as "The Peak", in the southwest end of large sloping boulder, 27 feet west of 10 inch white oak tree, about 25 feet southeast of edge of rock cliff, and 18 feet southwest of a 4 inch triangle blazed white-oak tree. To reach from junction of U.S. Route 421 and Tennessee Route 67 (North Carolina Route 16) at Trade, Tennessee, go east 7.2 miles on Route 16 (west 1.1 miles past J. S. Stevens' store), turn right across bridge onto county road and go 1.15 miles, keep on main road to left and go 0.4 mile, turn right onto farm road and go 0.3 mile to home of Charlie Osborne at end of truck travel, follow farm road about 1/2 mile through orchard to gap in fence, bear left onto dim road 1/2 mile up left branch of valley, turn left onto cross trail at blazed oak and go 1/8 mile to top of ridge, turn right onto trail along top of ridge and go about 1 mile to triangle blazed oak tree at top of ridge, turn right and go about 1 1/2 miles along backbone of ridge and station site. Station mark is a standard disk triangulation station mark set in concrete in a boulder.

Reference and azimuth marks are standard disk reference marks with the arrows pointing toward the station set in concrete in a depression in a boulder.
 Reference Mark 1 is at the southwest end of a mass of jagged boulders at edge of rock cliff and 17,349 meters (56,92 feet) from the station in geodetic azimuth 216°32'.

Reference Mark 2 is in a wide flat top of sloping boulder, on downward slope of ridge and 6.880 meters (22.57 feet) from station in geodetic azimuth 320°30'.

Azimuth mark is on high rocky spur, in northwest tip of pointed boulder and about 300 yards from the station.

GEODETIC POSITION: Lat. = 36°24'11.546"; Long. = 81°38'37.884" (C-2)
Geodetic Azimuth to Azimuth Mark: 13°41'13.0"

GRID POSITION (North Carolina): X = 1,221,931.18; Y = 976,023.45 (C-2)
Grid Azimuth to Azimuth Mark: 15°12'46"

GRID POSITION (Tennessee): X = 3,281,612.37; Y = 760,628.17 (C-2)
Grid Azimuth to Azimuth Mark: 11°08'11"

GRID POSITION (Virginia): X = 1,074,835.65; Y = 40,846.24 (C-2)
Grid Azimuth to Azimuth Mark: 15°35'41"

TT 16 TWC (USGS, 1950; Ashe County, North Carolina)

Located 0.6 mile east of Warrensville, along State Highway 88 to concrete bridge over Buffalo Creek; 15 feet west of centerline of highway, 15 feet north of centerline of highway, in wheelguard, 6 feet west of northeast end. Station is a standard tablet stamped "TT 16 TWC 1950 2728" and painted "BM 2728.3".

Reference Mark 1 is 100 feet west of tablet, on northwest wingwall of bridge; chiseled square 0.41 feet lower than tablet.

Reference Mark 2 is 20 feet upstream from bridge; 20 feet landward from edge of low water channel; on bedrock on right bank; chiseled square = Gaging Station reference mark, and is 22.61 feet lower than tablet.

GEODETIC POSITION: Lat. = 36°27'17.30"; Long. = 81°30'59.54" (G-3)
GRID POSITION (North Carolina): X = 1,259,868; Y = 993,830 (G-3)
ELEVATION: 2728.27 feet (G-3)

TT 17 TWC (USGS, 1950; Ashe County, North Carolina) *Good 6-26-91*

Located at Clifton, 2.5 miles east of post office, along State Highway 88, 13 feet south southeast of centerline of highway, 15 feet east of ENE field road intersection south. Station is a standard tablet stamped "TT 17 TWC 1950", in west end of south headwall of concrete culvert.

GEODETIC POSITION: Lat. = 36°27'30.81"; Long. = 81°32'34.69" (G-3)
Geodetic Azimuth to tip of lightning rod (next to chimney) on two-story white frame house: 1000 feet; 214°09'35"

GRID POSITION (North Carolina): X = 1,252,131; Y = 995,394 (G-3)

TT 18 TWC (USGS, 1950; Ashe County, North Carolina) *NF 6-26-91*

Located at Clifton, about 700 feet southwest of post office, along State Highway 88 to Eldredth Store; 33 feet south of centerline of highway. Station is a standard tablet stamped "TT 18 TWC 1950" in concrete porch about 5 feet east of west end.

GEODETIC POSITION: Lat. = 36°26'48.05"; Long. = 81°34'15.98" (G-3)
Geodetic Azimuth to peak of iron post supporting Esso sign: 300 feet; 223°45'43"

GRID POSITION (North Carolina): X = 1,243,746; Y = 991,284 (G-3)

TT 19 TWC (USGS, 1950; Ashe County, North Carolina) *DEBT 6-26-91*

Located at Fig, 0.4 mile east of post office, along State Highway 18 to bridge; 12 feet north of centerline of highway. Station is a standard tablet stamped "TT 19 TWC 1950", in top of northwest wingwall of bridge. *BOX CULV*

GEODETIC POSITION: Lat. = 36°27'16.38"; Long. = 81°36'02.51" (G-3)
GRID POSITION (North Carolina): X = 1,235,119; Y = 994,375 (G-3)

TT 20 TWC (USGS, 1950; Ashe County, North Carolina) *NF 6-26-91*

Located 1.7 miles west of Fig, along State Highway 88 to residence of Mr. Todd Price, 36 feet west of centerline of highway, about 300 feet south of Price residence, and 6 feet north of powerline pole. Station is a standard tablet stamped "TT 20 TWC 1950", in top of quartz stone outcrop.

GEODETIC POSITION: Lat. = 36°26'29.46"; Long. = 81°37'01.95" (G-3)
Geodetic Azimuth to tip of lightning rod on west gable of large unpainted barn: 100°07'33"

GRID POSITION (North Carolina): X = 1,230,139; Y = 989,759 (G-3)

TT 21 TWC (USGS, 1950; Ashe County, North Carolina)

Located 0.6 miles west of Creston post office, along State Highway 88 to church, 60 feet east of centerline highway, 8 feet north northwest of northeast corner of church. A standard tablet stamped "TT 21 TWC 1950", in rock outcrop.

GEODETIC POSITION: Lat. = 36°26'07.79"; Long. = 81°38'29.74" (G-3)
GRID POSITION (North Carolina): X = 1,222,910; Y = 987,758 (G-3)
ELEVATION: 2894.59 feet (G-3)

TT 22 TWC (USGS, 1950; Ashe County, North Carolina) *DISK GONG-HOLE ONLY*

Located at Ashland post office, 16 feet southeast of an old corn mill (still in operation), in large limestone outcrop which supports northeast end of foot bridge. Station is a standard tablet stamped "TT 22 TWC 1950".

GEODETIC POSITION: Lat. = 36°26'27.32"; Long. = 81°39'24.83" (G-3)
GRID POSITION (North Carolina): X = 1,218,462; Y = 989,852 (G-3)
ELEVATION: 2918.39 feet (G-3)

TT 23 TWC (USGS, 1950; Ashe County, North Carolina)

Located 1.5 miles east of Parker post office, along gravel road to an abandoned school, 15 feet southwest of centerline of road, 4 feet east of northwest corner of school. Station is a standard tablet stamped "TT 23 TWC 1950" and set in concrete post.

Report on Condition (TVA, 1960): Bench mark found with 1.0 foot broken off.

GEODETIC POSITION: Lat. = 36°27'03.37"; Long. = 81°40'36.06" (G-3)
GRID POSITION (North Carolina): X = 1,212,741; Y = 993,653 (G-3)

UE 2665.0 (USGS, 1950; Ashe County, North Carolina)

Located on northeast side of road, on east corner of bottom concrete step of steps leading to house; about 1 mile southeast of Lansing, North Carolina. Station is a chiseled square, painted "UE 2665.0".

ELEVATION: 2664.98 feet (G-3)

UE 2682.0 (USGS, 1950; Ashe County, North Carolina)

Located about 2 feet lower than road, on south corner of southwest concrete pier of bridge, about 1/2 mile northeast of Warrensville. Station is a chiseled square, painted "UE 2682.0".

ELEVATION: 2681.97 feet (G-3)

UE 2838.8 (USGS, 1950; Ashe County, North Carolina)

Located on the northeast side of road at Smethport, on southeast end of concrete base of gas pump of Esso Station. Station is a chiseled square, painted "UE 2838.8".

ELEVATION: 2838.82 feet (G-3)

UE 2911.7 (USGS, 1963; Ashe County, North Carolina)

Located about 1.1 mile south of Creston, 15 feet east of, and 1 foot higher than centerline of road. Station is a chiseled square, painted "UE 2911.7" and on a large rock.

ELEVATION: 2911.69 feet (G-3)

UE 3003.0 (USGS, 1963; Ashe County, North Carolina)

Located about 2 1/2 miles south of Baldwin, 26 feet northeast of U.S. Highway 221 and County Road 1177. Station is a chiseled square, painted "UE 3003.0", on north side of road on 18 inch concrete pipe.

ELEVATION: 3003.04 feet (G-3)

UE 3022.0 (USGS, 1963; Ashe County, North Carolina)

Located about 1/2 mile northwest of Trout, 15 feet west of, and level with centerline of road. Station is a chiseled square, painted "UE 3022.0", on small rock.

ELEVATION: 3022.04 feet (G-3)

UE 3034.0 (USGS, 1963; Ashe County, North Carolina)

Located in Todd, 13 feet north of, and 1 foot lower than centerline of road. Station is a chiseled square, painted "UE 3034.0", on northeast corner of concrete culvert.

ELEVATION: 3034.01 feet (G-3)

UE 3045.6 (USGS, 1963; Ashe County, North Carolina)

Located in Trout, 13 feet north of, and level with centerline of road. Station is a chiseled square, painted "3045.6", on northeast corner of concrete headwall of bridge over small creek.

ELEVATION: 3045.59 feet (G-3)

UE 3067.8 (USGS, 1963; Ashe County, North Carolina)

Located about 0.4 miles south of Trout, 10 feet east of and 3 feet higher than centerline of road. Station is a chiseled square, painted "UE 3067.8", on rock ledge.

ELEVATION: 3067.80 feet (G-3)

UE 3168.1 (USGS, 1963; Ashe County, North Carolina)

Located about 0.6 mile west of Buffalo Church, 12 feet south of and 1 foot lower than centerline of road. Station is a painted circle, on 48 inch metal pipe.

ELEVATION: 3168.09 feet (G-3)

UE 3181.4 (USGS, 1963; Ashe County, North Carolina)

Located about 0.9 miles northeast of Three Top Church, 10 feet north of, and 4 feet higher than road. Station is a chiseled square, painted "3181.4", on rock outcrop.

ELEVATION: 3181.36 feet (G-3)

UE 3247.3 (USGS, 1963; Ashe County, North Carolina)

Located 0.4 miles south of Tolliver, 22 feet west of and level with centerline of road. Station is a chiseled square, painted "UE 3247.3", on concrete base of Shell gas pump.

ELEVATION: 3247.26 feet (G-3)

UE 3248.9 (USGS, 1963; Ashe County, North Carolina)

Located 0.4 miles east of Laurel Knob Church, 15 feet north of, and level with centerline of road. A chiseled square, painted "UE 3248.9", on bottom step leading to two-story brick house.

ELEVATION: 3248.94 feet (G-3)

UE 3280.0 (USGS, 1963; Ashe County, North Carolina)

Located on the southwest corner of front bottom step to Baldwin Community Church. Station is a chiseled square, painted "UE 3280.0".

ELEVATION: 3279.93 feet (G-3)

UE 3293.2 (USGS, 1963; Ashe County, North Carolina)

Located at Laurel Knob Church, 16 feet south of centerline of road. Station is a chiseled square, painted "3293.2", on north end of side walk leading to Laurel Knob Baptist Church.

ELEVATION: 3293.26 feet (G-3)

UE 3303.3 (USGS, 1963; Ashe County, North Carolina)

Located about 1.1 mile northeast of Todd, 15 feet northwest of, and about level with road. Station is a chiseled square, painted "3303.3" on northwest end of concrete culvert.

ELEVATION: 3303.37 feet (G-3)

UE 3325.1 (USGS, 1963; Ashe County, North Carolina)

Located 0.1 mile northwest of Ben Bolen Church, 8 feet northwest of and 1 foot higher than centerline of road. Station is a chiseled square, on small rock, painted "3325.1".

ELEVATION: 3325.10 feet (G-3)

UE 3330.3 (USGS, 1963; Ashe County, North Carolina)

Located about 2.3 miles northwest of Todd, 12 feet south of, and 2 feet lower than centerline of State Highway 194. Station is a chiseled square, painted "3330.3", on southwest end of concrete culvert.

ELEVATION: 3330.30 feet (G-3)

UE 3331.9 (USGS, 1963; Ashe County, North Carolina)

Located 0.4 mile northeast of Woodford, and 2 feet higher than centerline of road. Station is a chiseled square, painted "3331.9" on large rock.

ELEVATION: 3331.94 feet (G-3)

UE 3370.5 (USGS, 1963; Ashe County, North Carolina)

Located 1.7 miles northeast of Ben Bolen Church, 10 feet north of and about 2 feet higher than centerline of road. Station is a chiseled square on a large rock.

ELEVATION: 3370.55 feet (G-3)

UE 3379.7 (USGS, 1963; Ashe County, North Carolina)

Located about 1 mile north of Woodford, 20 feet west of, and about 2 feet lower than road opposite. A chiseled square, painted "UE 3379.7" on old concrete gas pump.

ELEVATION: 3379.73 feet (G-3)

UE 3454.2 (USGS, 1963; Ashe County, North Carolina)

Located about 2.8 miles from Todd post office, 30 feet south and 65 feet east of, and 2 feet lower than centerline of T-road southeast. Station is a chiseled square, painted "3454.2", on southeast end of south headwall of concrete culvert.

ELEVATION: 3454.25 feet (G-3)

UE 3460.9 (USGS, 1963; Ashe County, North Carolina)

Located 0.65 miles south of Laurel Knob Gap, 15 feet northwest of, and 1 foot lower than centerline of road. Station is a chiseled square, painted "3460.9" on northwest corner of concrete culvert.

ELEVATION: 3460.88 feet (G-3)

UE 3594.0 (USGS, 1963; Ashe County, North Carolina)

Located about $\frac{1}{2}$ mile northeast of Ben Bolen Church, 20 feet north of and 2 feet higher than road. Station is a chiseled square on small rock.

ELEVATION: 3594.00 feet (G-3)

UE 3655.0 (USGS, 1963; Ashe County, North Carolina)

Located 0.3 miles north of summit of Three Top Mountain, 10 feet north of and 1 foot higher than County road 1131. Station is a chiseled square on rock outcrop.

ELEVATION: 3655.05 feet (G-3)

UE 3680.9 (USGS, 1963; Ashe County, North Carolina)

Located in Laurel Knob Gap, about 150 feet west of T-road south (County Road 1113); 15 feet north of centerline of road. Station is a chiseled square on southwest corner of concrete culvert, painted "UE 3680.9."

ELEVATION: 3680.95 feet (G-3)

W 61 (USC&GS, 1934; Watauga-Johnson Counties, North Carolina-Tennessee)

Located about 0.8 mile south along U.S. Highway 421 from Trade, Johnson County, Tennessee, along U.S. Highway 421, about 10 feet south of the North Carolina-Tennessee State line fence, about 35 feet west of the centerline of the highway, and at the foot of a bank. Station is a standard USC&GS disk stamped "W 61 1934", and set in the top of a concrete post projecting about 4 inches above the ground.

ELEVATION: 3279.459 feet or 999.581 meters (C-2)